

REMARKS

Status of the Application

A final rejection was mailed January 18, 2006 wherein claims 2-18 were rejected.

Claims 2 and 3 have been amended. Claim 7 has been cancelled and Claims 4-6 and 8-18 had previously been presented. Claims 4-6 and 8-11 are dependent on Claim 2 and Claims 12-18 are dependent on Claim 3.

Claim Rejections – 35 USC § 103

Claims 2-8, 10-15 and 17-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hellmann et al. US 5,412,000, in view of Ozawa et al. US 5,492,963, in further view of Shiraishi et al. US 6,670,414.

The amended Claims 2 and 3 provide for an additional process step not taught or recognized by any of the cited references. In Claim 2, a first base coat layer is applied to a plastic substrate that contains the adhesion promoting composition B and then a second layer of the base coating that does not contain the adhesion promoting composition B is applied over the first base coat layer then the clear coat layer is applied thereover.

Similarly, Claim 3 provides for application of a mono-coat finish layer that contains the adhesion promoting composition B and then a second layer of the mono-coat that does not contain the adhesion promoting composition B is applied. These particular methods provide color coatings that have excellent adhesion to the plastic substrate and good color accuracy that can not be achieved, for example, by using a primer layer over which a pigmented base coat or pigmented mono-coat is applied (see Applicants' specification page 13, lines 19-30). Support for the amendment is previously presented claim 7 which has been canceled.

Hellmann is directed toward primers that are applied to the plastic substrate. Applicants' applied compositions are not primers but properly formulated base coats or mono-coats (top-coats). In the claimed process, Applicants apply a color base coat or a color mono-coat containing a

mixture of adhesion promoting compositions, i.e., ethylene vinyl acetate copolymer, chlorinated rubber and chlorinated polyolefin, directly to a plastic substrate and then apply a second coating of either the color base coat or mono-coat that do not contain the mixture of adhesion promoting compositions. This process clearly is not contemplated or suggested by any of the references or combination thereof.

Further, since Hellmann is directed to primers, Hellmann only uses epoxy resins as a binder component whereas Applicants claims exclude epoxy resins. Epoxy resins can not be used as topcoats (mono-coats) or base coats since these resins are readily degraded by UV light. Applicants have amended the claims to used only binder components that are stable to UV light exposure and weathering. The binder components set forth in the claims are from the group of polyurethanes, acrylated polyurethanes, polyacrylates, polyesters, acrylated polyesters or alkyd resins and do not include epoxy resins.

Furthermore, primers do not contain the pigments that are required to provide the desired colour to the painted plastic part. By applying two base coats or topcoats (mono-coats) Applicants have eliminated the primer layer that is required by Hellmann and are able to form a finish with more distinct and clear color than is possible with the only the application of a single base coat or top coat. This is not taught by Hellmann or the other references.

Still further, Hellmann does not teach the use of a chlorinated rubber which is a necessary component of Applicants' composition used in the process as claimed. For this component, the Examiner reaches out to Ozawa to show that chlorinated rubbers are useful but Ozawa is directed to adhesive compositions and not to coating compositions. Clearly, Ozawa is non-analogous art the indicia of which is shown by the international classification and the U.S. classification of Ozawa. None of the classifications noted on the cover page of Hellmann and Ozawa match. Ozawa is directed to a completely different area of art and should

not be used as a reference in combination with coating patents of Hellmann and Shirashi. Ozawa does not mention or suggest coating of plastics with two layers of either a base coat or mono-coat compositions wherein the first layer contains the adhesion promoting composition which is Applicants' invention as set forth in the amended claims.

Shiraishi does not show or suggest the application of two color coatings with the first containing the adhesion promoting components nor does Shiraishi show the three adhesion promoting components required in Applicants composition. In particular, Shiraishi does not show or suggest the use of the chlorinated rubber that is required in the compositions used in applicants process. Further, the chlorinated polyolefin component used by Shiraishi requires 1-10% by weight of grafted carboxyl groups (See Shiraishi, col. 3, lines 9-12). The chlorinated polyolefins used in Applicants compositions do not contain carboxyl containing groups.

Only Ozawa shows chlorinated rubber. However, Ozawa is directed to adhesives not coatings and has nothing to do with coatings. As pointed out above, Ozawa is concerned with providing rubber to metal adhesives for bonding elastomeric materials, such as, vulcanized elastomers to metal surfaces. This adhesive field of technology is far from the technical field of the coatings art for application of multilayer coatings to plastics and is non-relevant art. One skilled in the coatings art would not look to a reference to solve a coating problem that is not related to coatings and contains no teachings or suggestions for the modification of coating. To combine references as has been done there must be at least some motive to combine and here there is none.

Claims 3, 12-15, 17-18 were also rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi, supra, in view of Ozawa, supra. The above comments concerning these two references also apply to this rejection and will not be repeated. For the reasons given above, these references do not show or suggest Applicants' invention set forth in the amended claims and the rejection should be withdrawn.

Claims 2, 4-8, 10 and 11 were further rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi, supra, Ozawa, supra further in view of Hellmann. This is essentially the same rejection discussed above and the above comments concerning these references apply here also and will not be repeated. For the reasons given above, these references do not show or suggest Applicants' amended claims and the rejection should be withdrawn.

Claims 9 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hellmann, supra, in view of Ozawa, supra, in view of Shiraishi, further in view of Heaps et al. US 4,517,327 and Corcoran et al US 5,279,862. The above comments concerning Hellmann, Ozawa and Shiraishi also apply to this rejection and will not be repeated. Corcoran and Heaps only show waterborne compositions but not Applicants' invention and certainly can not be considered to be relevant references. The rejection should be withdrawn.

Applicants have amended the claims that are directed to a process not taught or suggested by the cited references and have pointed out the deficiencies of the cited references and combinations thereof in regard to the amended claims; the amended claims now should be in allowable form and the application allowed.

SUMMARY

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance. In order to expedite disposition of this case, the Examiner is invited to contact Applicants' representative at the telephone number below to resolve any remaining issues. Please charge any fee due which is not accounted for to Deposit Account No. 04-1928 (E.I. du Pont de Nemours and Company).

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Hilmar L. Fricke", is written over a horizontal line.

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Application Number: 10/634,330
Filing Date: August 4, 2003
First Named Inventor: Harald Kloeckner
Title: Method for Painting Plastic Substrates
Attorney Docket No: FA1144 US NA

- Transmittal Form
- Amendment and Response to Final Office Action Mailed January 18, 2006
- Receipt Card